Chapter 1. Purpose and Need for Action

1.1 Introduction

The Forest Service has prepared this FEIS in compliance with the *National Environmental Policy Act* (NEPA) and other relevant Federal and State laws and regulations. This FEIS discloses the direct, indirect, and cumulative environmental impacts that may result from the proposed action and alternatives. The information summarized in the following sections is based upon field data and analyses as described in detail in this FEIS; chapter 3: "Affected Environment and Environmental Consequences," the FEIS appendices and associated resource reports and assessments.

1.2 Document Structure

The document is organized into four chapters, followed by an index and appendices.

- **Chapter 1. Purpose and Need for Action**

  This chapter briefly describes the proposed action, the need for that action, and other purposes to be achieved by the proposal. This section also details how the Forest Service informed the public of the proposed action and how the public responded.

- **Chapter 2. Alternatives, including the Proposed Action**

  This chapter provides a detailed description of the agency's proposed action as well as alternative actions that were developed in response to issues and public comments. The end of this chapter includes a summary table comparing the proposed action and alternatives with respect to their environmental effects.

- **Chapter 3. Affected Environment and Environmental Consequences**

  This chapter describes the environmental impacts of the proposed action and alternatives.

- **Chapter 4. Consultation and Coordination**

  This chapter provides a list of preparers and agencies consulted during the development of the environmental impact statement.

- **Index**

  The index provides page numbers by document topic.

- **Appendices**

  The appendices provides more detailed information to support the analyses presented in the environmental impact statement.

Additional documentation, including more detailed analyses of resource specific impacts, may be found in the project record located at the Feather River Ranger District office, 875 Mitchell Avenue, Oroville, CA 95965.

1.3 Changes between the Draft and Final Environmental Impact Statements

Following the distribution of the Sugarloaf Hazardous Fuels Reduction Project DEIS, minor grammatical changes, formatting and spelling corrections, along with additions to FEIS were made, including:

Chapter 1 – Section 1.1.was simplified to reduce redundancy under section 1.2 (introduction to Chapter 1). The addition of section 1.3, Changes between the Draft and Final Environmental Impact Statements disclosing the grammatical and technical errors and additional information incorporated in the FEIS. The description of desired condition and measurement indicators was added to section 1.4.1, inadvertently omitted in the DEIS. Minor technical corrections (e.g., tree canopy densities replaced with tree densities), further discussion on the need for action and addition of quantitative desired condition parameters were incorporated in sections 1.4.1, 1.4.2 and 1.4.3 to improve clarity. Section 1.5 was been expanded to disclose the timing and sequence of treatments proposed, along with the various planned contractual implementation and administrative procedures. In section 1.7, the discussion of Region 5 (California) Guidance on Court Order for a Non-commercial Funding Alternative direction was deleted as it no longer applies. Further discussion of Valley Creek Special Interest Area, Wild, Scenic and Recreation River and Critical Aquatic Refuge land allocation management direction within the project area was incorporated under section 1.7 to improve clarity. In section 1.8, a summary of public comments submitted on the Sugarloaf DEIS was added. The discussion on the significant cumulative watershed effects (CWE) issue was edited in section 1.9. Further consideration for effectiveness of design features and mitigation measures incorporated into all action alternatives, along with inherent temporal limitations of the Equivalent Roaded Acres (ERA) model (assumes all treatments are implemented at once) over estimated intensity of effects. Section 1.9 was revised to reflect CWE is considered a relevant issue. Section 1.10 was revised to clarify forensic and effectiveness water quality monitoring is required in compliance with the Timber Harvest Activities Waiver Program. The discussion associated with securing road right-of-way permits was deleted, as further investigation indicates there are no right-of-way agreements along access roads needed to conduct operations.

Chapters 2 – In chapter 2, the discussion of Region 5 (California) Guidance on Court Order for a Non-commercial Funding Alternative under alternative C was deleted, as this direction no longer applies. For this reason, non-commercial funding in the alternative C title was replaced with Hazardous Fuels Reduction throughout section 2.1.9 and throughout chapter 3. Section 2.2.1 was added to disclose the rationale for eliminating an alternative to use goats as a management tool from detailed study. Minor grammatical and technical errors were made to section 2.2 to improve clarity including tables 2-3 through 2-11. The duplicate alternative B map inserted before section 2.2.2 was deleted.

Chapter 3 – In order to reflect changes to the updated Regional Foresters Sensitive Species List (FSS) (September 9, 2013), the common and scientific names for the marten and fisher have been updated in section 3.5 (Wildlife-Terrestrial) from American marten (*Martes americana*) to Pacific marten (*Martes caurina)* and from Pacific fisher (*Martes pannanti pacifica*) to fisher *(Pekania pennanti).* In addition, the Western bumble bee (*Bombus occidentalis*) and Fringed myotis (*Myotis thysanodes*) were added to the FSS list and therefore included in the analysis discussion: section 3.5.3

includes indicators and measures, assumptions and data sources; section 3.5.4 includes affected environment; section 3.5.5 includes environmental consequences; section 3.5.6, includes summary and comparison of alternatives.

In order to reflect changes to the updated Regional Foresters Sensitive Species List (FSS) (September 9, 2013) throughout the section: the common and scientific names for the yellow-legged frog and pond turtle been updated in section 3.6, (Wildlife-Aquatic) from Mountain yellow-legged frog (*Rana muscosa*) to Sierra Nevada yellow-legged frog (*Rana sierrae*) and the Pacific pond turtle (*Actmemys marmorata*) to the Western pond turtle to Pacific marten (*Emys marmorata).*

Additional supporting text was added to section 3.6.1 – introduction and 3.6.3-Effects Analysis methodology. In section 3.6.4 – Affected Environment text was summarized upfront for direction and suitable habitat for aquatic species. Text was added for the Sierra Nevada yellow-legged frog (SNYLF) to clarify and to be more specific regarding analysis area occurrence potential based on historical detections and suitable habitat. In section 3.6.5 – Environmental Consequences text was added to introduction portion to clarify short-term effects from long-term effects, and rounding off numbers in table 3-27 to whole numbers. Under alternatives B, C and D – Direct and Indirect Effects – Riparian & Aquatic Habitat text was pulled out of following sections that related to general habitat effects and included in this section. Under alternatives B, C and D- Direct and Indirect Effects – Western Pond Turtle, Foothill Yellow-legged Frog and Sierra Nevada Yellow-legged Frog direct effects which are not expected was clarified up front before individual species discussion. Table 3-29 –Threshold of Concern (TOC) was updated. Subwatershed 11 was changed from under TOC to approaching TOC. Clarification is discussed in the Hydrology section 3.7. Table 3-30 – Habitat Alterations by species by alternative was edited by removing Pats Gulch, which was for an area that was dropped from the Sugarloaf project. The largest and most meaningful change from the draft to the final Sugarloaf document is discussion regarding the Sierra Nevada yellow-legged frog (SNYLF). The text discussing effects to the frog was pulled out and separated into its own subsection in order to clearly present the potential effects for the SNYLF and/or its habitat. In addition, text was added to better described potential effects related to each stream which had SNYLFs and/or suitable habitat for the frogs.

In section 3.7 (Hydrology) tables 3-36, 3-37, 3-42, 3-43, 3-44, 3-45, 3-47, and 3-48 in section 3.7.6 were updated to reflect new data and findings. Minor grammatical changes were made to improve clarity of the Equivalent Roaded Acres (ERA) cumulative watershed effect analysis methodology in 3.7.4. In sections 3.7.2 and 3.7.6, minor grammatical and technical changes were made to correct mislabeled treatment methods, clarify Forest Plan direction, applicable standards and guidelines and comparison of effects between alternatives based on new ERA information.

In sections 3.8.6 and 3.8.7, mitigation requiring the application of weed free straw to units that do not meet the minimum guidelines for effective soil cover was deleted; deemed unnecessary as slash will be abundant post operations. The mitigation requiring the application of native grass seed for surface stabilization of landings and skid trails was deleted; considered unnecessary as design criteria for placement, limited operating period and waterbar placement would adequately minimize surface runoff, erosion and sediment from reaching streams. Mislabeled treatment methods listed in table 3-51 in section 3.8.6 were corrected.

Section 2.1.4.2 under Riparian Habitat Conservation Areas (RHCAs) and Riparian Conservations Areas (RCAs) was revised to clarify mechanical (grapple) piling is a proposed treatment within riparian corridors. In section 2.1.9, the disclosure NFS roads PC511A, 22N53, 21N18A and 21N42Y would be improved to mitigate short term effects to water quality under Alternative C was added. The analysis of Riparian Conservation Objective (RCO) and the Response to Comments (RTC) were incorporation in appendix A of the FEIS, along with a logical reordering.

1.4 Purpose and Need for Action

The purpose and need explains why an agency action is necessary and is the basis for identifying reasonable alternatives. Agencies draft a Purpose and Need statement to describe what they intend to achieve with the action they are proposing. The following subsections present the four elements of the Purpose and Need for this federally proposed action.

1.4.1 Purpose 1: Reduce Hazardous Fuels

Objective. Reduce wildfire hazards to natural resources on National Forest System (NFS) lands and the at-risk communities of LaPorte and American House to achieve desired fire behavior.

Need for Action. There is a need for reducing hazardous fuel accumulations within the Sugarloaf Project area. There are 1,289 communities currently on the Communities at Risk List managed by the California Fire Alliance, including the community of LaPorte, featuring and surrounded by excessive amounts of highly flammable fuels on NFS lands. Although American House is not currently on the California Fire Alliance list of Communities at Risk, it is classified as at-risk in the Plumas County Community Wildfire Protection Plan (CWPP).

Since the early 1900s, private and government land development, along with wildfire suppression practices over the past 90 years, has altered natural fire regimes leading to overcrowded forest conditions and buildup of highly flammable vegetative fuels. Based on the historic precedent, fire records indicate wildfire consumed down woody forest debris (i.e., surface fuels) and caused a high degree of small tree mortality in the forest understory (e.g., ladder fuels). Heavy timber litter has a high propensity for fire ignition and rapid spread, while the dense understory acts as a fuel ladder. The fuel loading or amount of combustible material associated with Fuel Model (FM) TU5 for dead and down woody material less than 3 inches in diameter (primary fire carrier) is 11 tons per acre.

Currently, overstocked forest lands are mostly composed of Sierra mixed-conifer and white-fir forest types which feature:

- Vertical and horizontal continuum of vegetative fuels capable of supporting large-scale, rapid moving fire
- Average canopy base height less than 15 feet, with tree branches positioned low to the ground, which tends to support wildfire behavior characterized by 4 foot or greater flame lengths along with torching of a single tree or small group of trees, from the ground up

- Fires burning in similar vegetation conditions, fire behavior predictions and expert local knowledge indicate these present conditions in the Sugarloaf Project Area are likely to result in high intensity fire behavior.

In the project area, a lightning prone landscape, where human-caused ignition is a contributing factor, wildfire is often difficult to suppress due to: (1) impassable roads and lengthy travel response time; (2) potential for high (greater than 4 feet) flame lengths; (3) steep terrain making anchor points difficult to establish; and, (4) rapid tree crown to tree crown fire spread (active crown fire).

Desired Condition. The desired condition is fire-resistant forest, dominated by large fire-tolerant trees with crowns sufficiently spaced to limit the spread of crown fire. Understory vegetation is spaced and pruned to achieve average canopy base heights of 15 feet. Surface fuels are generally sparse with occasional large down logs that result in surface fires with flame lengths of less than 4 feet when burning under high fire weather conditions.

Measures of Modifying Fire Behavior. Pre-treatment conditions and post treatment indicators include potential flame length (feet), fire type (surface versus crown fire); and canopy base height (feet).

1.4.2 Purpose 2: Promote Forest Health

Objective. Modify tree densities, tree species composition and forest structure to develop a mosaic of gaps and clumps, and restore ecologically healthy forest conditions, resilient to climate change, insects and pathogens.

Need for Action. There is a need for establishing mid to late seral forests capable of supporting healthy canopy cover, such as within home range core areas (HRCAs) for the California spotted owl as designated by the Sierra Nevada Forest Plan Amendment (SNFPA) Final Supplemental EIS (FSEIS) and Record of Decision (ROD) (USDA 2004a, 2004b).

Historic fire records indicate the last wildfire occurred approximately 100 years ago. Today, homogenous, overcrowded forestlands are in need of density management or maintenance prescribed fire to re-establish and sustain a diverse suite of tree and plant species, structural complexity (gaps and clumps) and disturbance cycles; a first step toward restoring healthy forest conditions more characteristic of those that developed under the influence of active fire regimes.

Within the Valley Creek Special Interest Area (SIA) and spatially overlapping Protection Activity Center (PAC) and surrounding Home Range Core Areas (HRCAs), key habitats for wildlife such as the California spotted owl and Northern goshawk, there is a need for mimicking low-severity wildfire disturbance to preserve forest structure, composition, and function of late-successional old growth forests, recognized for their unique botanical and scenic values.

Desired Condition. The desired condition is an uneven-aged, multistoried, healthy forest with less than 60 percent relative density for the next 20 years; featuring decaying snags, large down wood, and dominated by large fire-tolerant trees with crowns sufficiently spaced to limit the spread of crown fire and spread of insects and diseases. Stand densities would be generally lower yet also variable. Mosaic forest canopy composed of gaps and clumps would promote the regeneration,

growth and development of ponderosa pine, sugar pine and black oak, while promoting heterogeneity resilient to climate change.

The desired condition within the Valley Creek SIA, PACs and surrounding HRCAs is fire-resilient old-forest featuring large trees with sufficient canopy cover (averaging 50 percent) to allow for nesting, filtered light conditions on the forest floor, a diversity of understory plants, adequate soil moisture and duff levels and low road densities.

Measures of Modifying Forest Structure and Species Composition. These include: stand structure measured by trees per acre, basal area per acre, and relative stand density; composition measured by percent change in shade-intolerant species; and landscape heterogeneity measured by percent change in CWHR size and density classes.

1.4.3 Purpose 3: Improve Watershed Health

Objective. Promote localized water quality for wildlife and beneficial uses, while reducing risk of long lasting disturbances to sensitive watersheds from wildfire.

Need for Action. There is a need for redesigning and decommissioning NFS (classified) roads and obliterating non-classified legacy roads to promote localized reductions in road-generated sediment production impacting water quality and habitats. Roads tend to modify stream channel networks to accelerate erosion processes. These changes can dramatically degrade water quality and aquatic habitats by altering flow, sediment loading, sediment transport and deposition, channel morphology, channel stability, substrate composition, stream temperatures and riparian conditions.

Historic levels of timber harvesting and hydraulic mining activities (concentrated in the Rabbit Creek watershed around LaPorte (subwatersheds 5, 6, and 8) and in the area of Secret Diggings (subwatershed 15), stripped away hillside vegetation and topsoil, still recovering today. The development of the transportation system (road density from 3.22 – 9.59 miles per square mile) to support these commercial operations impacted water quality, re-aligned stream courses and altered drainage flows and habitats.

Common hydrologic problems originating at roads include rutting and road surface erosion; poorly placed or inadequate stream crossings and surface drains that may fail, diversion of streams from natural courses if the crossing structure plugs (commonly termed diversion potential), or blockage of passage for fish, frogs and other aquatic organisms; and over-steepened cut-and-fill slopes prone to erosion and mass wasting. The interdisciplinary team (IDT) process for identifying NFS road classified needs and roads with resource damage includes a roads analysis consistent with legal requirements (36 CFR 212 Subpart A—Administration of the Forest Transportation Classified, 16 U.S.C. 551, 23 U.S.C. 205).

There is a need for preserving and protecting physical aquatic and riparian (essential) critical habitat features (clean water, forest canopy cover [shade] and protected streamside buffers [space]), considered at risk to post-wildfire deforestation and increased sedimentation (refer to sections 1.4.1 and 1.4.2). Within the designated Critical Aquatic Refuge (CAR) in the project area, populations of Sierra Nevada (Mountain) and Foothill yellow-legged frogs occupy some streams; migrating over land (roughly within 100 feet) in between breeding, foraging, and overwintering habitats. “In most

habitats, plant communities determine the physical structure of the environment, and therefore, have a considerable influence on the distributions and interaction of animal species" (Tews et al. 2004).

Past alterations to riparian vegetative composition and structure from human disturbances have promoted heavy fuel loading (dense riparian vegetation), now placing aquatic and riparian habitats at risk to forest health and landscape scale, high intensity wildfire impacts, increasing threatens to the potential viability of these rare habitats and declining frog species populations.

Desired Condition. The desired condition for watershed health is to maintain water quality and temperature for beneficial uses, in accordance with the 1988 Forest Plan, as amended, Plumas National Forest Public Motorized Travel Management FEIS and Record of Decision (ROD) (September 2010), Clean Water Act and the 2000 State Water Quality Management Plan (1981 Management Agency Agreement between the California State Water Resources Control Board and the USDA, 1998, revised 2007).

The desired condition specific for wildlife is to provide sustainable aquatic, riparian, and meadow compositions, structures and functions including processes within desired ranges of variability, well-distributed habitat for desired plant, invertebrate, and vertebrate species and connectivity among watersheds (USDA 2004d).

Measures of Improving Watershed Health. Miles of road obliterated, decommissioned and reconstructed; water temperature, sedimentation (threshold of concern measures as equivalent roaded acres [ERA]), and alterations to riparian habitat (method and area treated within streamside buffers).

1.4.4 Purpose 4: Contribute to Economic Stability

Objective. Afford a broad spectrum of marketable goods and job opportunities, and through the provision of enhancing aesthetic resource amenities for visitors, contribute to the economic stability of rural communities.

Need for Action. There is a need to provide employment opportunities for rural communities dependent upon forest products for jobs and revenue. Timber production from national forests peaked from the 1960s through the 1980s, and plummeted in the last several decades. Because the Forest Service dominates timberland ownership in Plumas County, California, and privately owned timber cannot fill the gap created by the decline of harvesting on NFS lands, there has been a sharp decline in forestry-related economic activity and employment.

The Plumas National Forest (the Forest) contributes to the regional economy in two primary ways: (1) through the generation of income and employment opportunities for residents of the immediate area, and (2) through direct and indirect contributions to local county revenues. The Forest also contributes in secondary ways, such as through fee revenues and production of goods and services in local and regional markets. Although some economic effects are dispersed over a broad area, the most substantial impacts are felt locally in Butte, Plumas, Lassen, Sierra, and Yuba Counties. Recent mills closures and loss of jobs within the sphere of economic influence to the project area, coupled with the waning housing market and rising cost of living, has cumulatively resulted in the loss of indirect and induced jobs (1.6 – 2.25 according to IMPLAN documentation in the Framework EIS).

The communities of LaPorte and American House are within reasonable log haul distance of the project area, highly dependent on recreation opportunities in the forest areas for economic vitality. These opportunities take advantage of the natural forest and lake settings, the presence of historic and cultural remnants, and unique scenery and national significance to the backcountry and scenic hiking constituency including equestrians.

LaPorte is a key stopping place for supplies, food and lodging. Camping, fishing, boating, hiking, mountain bike and OHV trails, scenic auto tours, hunting, snowmobiling, and cross country skiing trails are all amenities supporting $130,000–$160,000 in recreation fee revenue annually. Further contributions to the Plumas National Forest budget, town of LaPorte and Plumas County include the revenues and taxes paid by outfitter guides that have special use authorizations to operate fishing and hunting guide services at Little Grass Valley Reservoir to the north and in the general forest surrounding the lake and LaPorte. Ninety five percent of the fees collected contribute to managing and improving these facilities and contribute to Plumas County's tax revenue stream.

The forest road network provides the foundation for the Feather River Ranger District's winter snowmobile program. This program leverages $22,000 of State of California Off-Highway Vehicle (OHV) funding, District appropriated funds with generous volunteer labor hours and private equipment contributions.

Desired Condition. The desired condition for community stability is local economies supported by environmentally sustainable use of NFS land natural resources, including outputs of sustained timber yield and biomass supplies, family wage jobs and tourism revenue.

Measures for Contributing to Economic Stability. Revenue/costs measured in sawlog harvest volume (MMBF), sawlog and biomass harvest revenues, harvest costs, net harvest revenues, non-harvest costs and total project value and employment/income measured in potential direct and indirect jobs and potential employee income.

1.5 Proposed Action

The Feather River Ranger District of the Plumas National Forest is proposing to implement mechanical variable density thinning (859 acres) and thin from below (76) acres expected to produce 4.6 million board feet of commercially-valuable timber, requiring 3.6 miles of NFS classified road reconstruction, 2 miles of unclassified road construction (closed post operations) and the construction of 24 new landing sites. Mechanical timber harvest operations would be implement 1-4 years after the decision, either under timber sale contract(s) or stewardship contract(s), or a combination thereof schedule to begin in fall 2014.

An estimated 1 to 4 years after mechanical operations are complete, additional mechanical and manual fuels reduction activities targeting surface fuels, either overlapping mechanical treatments (pre-existing and post operational slash) or within overstocked plantations and shrub types, would be implemented.

Depending on localized environmental conditions, multiple treatment methods or re-entry using the same treatment method may occur in order to meet desired treatment objectives. Either

stewardship or service contracts would be employed to implement: (1) Mastication (278 acres), (2) Hand thin, hand pile, and pile burn (1,401 acres), and (3) Hand (manual) thin, machine (grapple) pile, and burn (71 acres).

As areas of mechanical and manual surface fuels reduction operations are completed, if necessary to achieve treatment objectives, prescribed fire would be implemented (up to 3,598 acres) on NFS lands, including 331 acres in the Valley Creek Special Interest Area (SIA). This sequence of operations would facilitate effective and safe commercial operations, while securing revenues to offset the costs of subsequent manual and prescribed burning activities.

Treatment areas that are exclusively treated by understory burning may need additional entries to meet desired conditions. As fire killed trees fall and contribute to surface fuel loading the effectiveness on modifying fire behavior is lessened (Collins et al. 2010). Second prescribed burn entries in underburn only units are expected to occur 5–7 years after initial treatment, to achieve desired fuel conditions.

Near the communities of LaPorte and American House and private property, proposed vegetation treatments are strategically positioned to reduce fuels between defensible fuel profile zones (DFPZs); planned prior to September 30, 2012 under the *Herger-Feinstein Quincy Library Group Forest Recovery Act* (HFQLG Act).

Infrastructure drainage improvements to NFS classified roads, 0.7 miles NFS road decommissioning and obliteration of 9.8 miles non-classified roads would be implemented concurrently as fuels reduction and vegetation treatments are being implemented to reduce road-generated sedimentation impacting water quality.

1.6 Decision Framework

The Responsible Official for the Sugarloaf Project, Forest Supervisor of the Plumas National Forest, Earl W. Ford, will decide whether to implement the Sugarloaf Project as identified in the Proposed Action, implement the project based on alternatives to the Proposed Action, or not implement the project at this time.

1.7 Forest Plan Direction

Direction for the Plumas National Forest is based on the 1988 Plumas National Forest Land and Resource Management Plan (commonly referred to as the "Forest Plan") and a major Forest Plan amendment.

In August 1988, the Regional Forester signed the Record of Decision for the Forest Plan. In January 2004, the Regional Forester signed the Sierra Nevada Forest Plan Amendment (SNFPA) final supplemental EIS Record of Decision, which replaced the 2001 SNFPA Record of Decision. The 2001 SNFPA final EIS and Record of Decision are incorporated by reference in the 2004 Record of Decision on the SNFPA Final Supplemental EIS (FSEIS). The following land allocations within the Sugarloaf project area apply:

Wildland Urban Interface **(297 acres).** The wildland urban interface (WUI) zone is an area where human habitation is mixed with areas of flammable wildland vegetation. It extends out from the edge of developed private land into Federal, private, and State jurisdictions. The WUI is comprised of two zones: the defense zone and the threat zone.

The WUI defense zone is the buffer in closest proximity to communities, areas with higher densities of residences, commercial buildings, and/or administrative sites with facilities. Defense zones generally extend roughly 1/4 mile out from these areas; however, actual defense zone boundaries are determined at the project level following national, regional and forest policy. Defense zones should be of sufficient extent that fuel treatments within them will reduce wildland fire spread and intensity sufficiently for suppression forces to succeed in protecting human life and property.

Threat zone boundaries generally extend approximately 1-1/4 miles out from the defense zone boundary; however, actual extents of threat zones are based on fire history, local fuel conditions, weather, topography, existing and proposed fuel treatments, and natural barriers to fire. Fuels treatments in these zones are designed to reduce wildfire spread and intensity. Strategic landscape features, such as roads, changes in fuels types, and topography may be used in delineating the physical boundary of the threat zone.

Northern goshawk Protected Activity Centers (PACs) **(792 acres) and** ***California spotted owl PACs*** **(614 acres).** Management treatments are designed to avoid California spotted owl protected activity centers (PACs) and northern goshawk PACs wherever possible, while strategically applying low intensity, understory forest thinning and prescribed fire along the perimeter and within spotted owl PACs to protect spotted owl and goshawk PACs from wildfire; rotating treatments on a decadal cycle to maintain suitable, undisturbed interior habitats; treating no more than 10 percent at a time.

California spotted owl home range core areas (HRCAs) **(2,540 acres).** A home range core area is established surrounding each territorial spotted owl activity center detected after 1986. Management treatments are designed to retain large habitat blocks that have: (1) at least two tree canopy layers; (2) at least 24 inches dbh in dominant and co-dominant trees; (3) a number of very large (greater than 45 inches dbh) old trees; (4) at least 50 to 70 percent canopy cover; and (5) higher than average levels of snags and down woody material.

Visual Quality Objective (VQO); Foreground and Partial Retention **(2257 acres).** Management treatments are designed to appear natural by retaining variable forest structure mimicking healthy forest conditions that would not be visually evident and would remain visually subordinate.

Wild, Scenic and Recreation River **(587 acres).** Management treatments avoid this designation thereby preserving all outstandingly remarkable values for the benefit and enjoyment of present and future generations. Free-flowing conditions are preserved by stabilizing sources of erosion. Human influence may be evident, but do not interfere with or impede the natural succession of river ecosystems by designing projects in compliance with VQOs.

Valley Creek Special Interest Area (SIA) **(189 acres).** Management treatments are designed to be consistent with standards and guidelines in the Plumas NF LRMP linked to SIAs per the Lost Creek Management Area (Area 13, p. 4-189) and the Minimum Management Prescription (Rx-7, p. 4-86) as specified: (a) protection of the area's unique botanical and scenic values; (b) maintenance of existing

physical characteristics through low intensity management; (c) management of vegetation only to perpetuate the old-growth characteristics; and (d) where compatible, encouragement of public use and/or use of other resources. The Forest Supervisor retains the authority to oversee preparation and implementation of an SIA's management direction, whereas the District Ranger is expected to implement all management direction for the area (FSM 2372.04).

***Critical Aquatic Refuge (CAR)* (847 acres).** Critical Aquatic Refuges include subwatersheds containing know locations of threatened, endangered, or sensitive species, highly vulnerable populations of native plant or animal species or localized populations of rare native aquatic- or riparian dependent plant or animal species. Management treatments are designed to be consistent with standards and guidelines associated with CAR and riparian conservation objectives (RCOs) in the 2004 Record of Decision on the SNFPA Final Supplemental EIS (FSEIS) (p.62-66).

FSM 1926.51 – Changes to the Land Management Plan that Are Not Significant. On September 30, 2012, the 2008 Consolidated Appropriations Act authorities to implement the *Herger Feinstein Quincy Library Group* (HFQLG) *Act* linked to unique standards and guidelines underlying the design of Alternative B ended. For this reason, Alternative B requires a Forest Plan amendment as the management direction and the standards and guidelines in the 2004 Sierra Nevada Forest Plan Amendment Record of Decision (ROD); Table 2, associated with establishing defensible fuel profile zones (DFPZs), Group Selection (GS) treatments (pgs. 66-69), and protecting riparian and California spotted owl habitats, are no longer authorized.

The Forest Service determined the proposed amendments would be non-significant based on criteria found in FSM 1900, Chapter 1920, Section 1926.5 as follows: (1) The actions proposed under alternative B would not significantly alter the multiple-use goals and objectives for long-term land and resource management, rather, defensible fuel profile zones (DFPZs) and 2004 fire and fuel management goals are similar, (2) Gaps (less than 1/10 to 1/2 acre) replaced by Group Selections (up to 1/2 acre to 2.0 acre gaps) are specific the project area, limited to 71 acres; and (3) The strategy, goals and objectives are very similar for the Aquatic Management Strategy (AMS) and Riparian Conservation Areas (RCA) under SNFPA 2004 that would be replaced by Riparian Area Management (RAM) and Riparian Habitat Conservation Areas (RHCA) under HFQLG 1999. Riparian buffers along with design features and mitigations protect watersheds, and therefore wildlife and aquatic species habitat. Minor adjustments of management area boundaries associated with replacing RCAs with RHCAs and associated management prescriptions are considered minor changes to standards and guidelines. The major difference for wildlife habitat is that under SNFPA 2004 treatments can be conducted to maintain or improve habitat within Protected Activity Centers (PACs), while HFQLG limited allowable treatments to low-intensity underburning. The pertinent goals and objectives and standards and guidelines related to the proposed Forest Plan amendments and why in the context of the whole plan they are not National Forest Management Act (NFMA) significant are further discussed in Appendix A-10.

1.8 Public Involvement

The Forest Service initiated scoping to inform the public about the purpose and need for the Sugarloaf Project to solicit different points of view on the pending action and issues to be addressed during the project analysis period and invite participation in the environmental analysis process. The Sugarloaf Hazardous Fuels Reduction Project was listed in the Plumas National Forest quarterly Schedule of Proposed Actions (SOPA) beginning in December 2012.

The Sugarloaf Project was initially scoped with the publication of the Notice of Intent in the *Federal Register* on Tuesday, June 5, 2012 (Vol. 77, No.108, pp. 33158-33159). On September 30, 2012, the *2008 Consolidated Appropriations Act* authorities to implement the HFQLG Act underlying the design of preferred Alternative B ended. The Sugarloaf Project FEIS presents D as the preferred Alternative.

On March 27, 2013, a final rule revising 36 CFR Part 218 became effective, establishing a pre-decisional objection process for projects and activities documented with a Record of Decision in lieu of the post-decisional appeal process used since 1993. The rule requires publication of legal notices to the Web. On May 25, 2013, the Sugarloaf Project legal notices were published on the Plumas National Forest (PNF) website: http://www.fs.usda.gov/plumas/landmanagement/projects/Sugarloaf Hazardous Fuels Reduction Project

In addition, the Forest Service mailed letters inviting comment on the Sugarloaf Project to 5 Tribal Councils, potentially affected mining claimants (near or within proposed treatment areas), other government agencies, interest groups and 443 potentially affected citizens. An additional 33 emails were sent with invitation to comment letter attached. A Scoping Packet providing information about the rationale and description of the proposed treatments by alternative was distributed and available on the PNF website. A revised Scoping Packet was distributed on April 14, 2013 to update interested stakeholders of project modifications and shift in notice and comment procedures.

On June 18, 2012, the Forest Service held an open house attended by three representatives from Sierra Pacific Industries, a Quincy Library Group (QLG) Counties' Forester, and several residents of LaPorte. Concerns for operational economic feasibility of treating biomass along with recommendations were provided. Residents expressed concerns for impacts to scenic quality and risks associated with applying prescribed fire.

On June 27, 2012, the Director of the John Muir Project of Earth Island Institute accompanied Forest Service specialists on a field site visit to the Sugarloaf project area providing recommendations and information regarding incorporating concepts from the General Technical Reports PSW–GTR-220 and PSW-GTR-237, prepared by the USDA Pacific Southwest Research Station (March 2009 and 2012 respectively) recommendations included mechanical thinning prescriptions strategically allow for moderate and high intensity prescribed fire and specific recommendations to promote Black-backed woodpecker habitat. The Northern Sierra Regional Representative for the Pacific Crest Trail Association, requested information and submitted comments on July 3, 2012 to protect and preserve the Pacific Crest National Scenic Trail and surrounding scenic quality as internationally significant resources.

On July 20, 2012, a scoping letter was received from the Lead Reviewer (R5) Environmental Protection Agency (EPA) expressing concerns regarding cumulative water quality impacts from road construction, increased habitat fragmentation and the potential for noxious weed proliferation linked to the HFQLG Act; specifically DFPZ and Group Selection treatments proposed in the HFQLG could be non-sustainable practices that will result in the future degradation of natural resources, available timber products and the overall economic welfare of the surrounding communities.

On July 26, 2013, the Forest Service initiated the 45-day comment period on the DEIS with the Notice of Availability published in the *Federal Register (Vol. 78, No.144, pp. 45190*. A comment period notice was also published in the *Feather River Bulletin* on July 26, 2013. Four comments were received from two agencies and two organizations. The Environmental Protection Agency (EPA) Region IX, Environmental Review Office provided recommendations for more comprehensive disclosure about climate change and limited biomass energy capacity in the FEIS, along with a Lack of Objections rating. The USDI Office of Environmental Policy and Compliance commented a review was conducted, with no comments to offer. The John Muir Project (JMP) Center for Biological Diversity (CBD) provided comments including requests for more information about data underlying predictive fire behavior modeling, consideration for research suggesting Spotted Owl populations are declining, mixed-severity habitats used by Pacific fishers and detrimental trends to the Black-backed woodpecker as a result of fire suppression and post-fire salvage logging. Sierra Pacific Industries (SPI) submitted comments supporting the Sugarloaf Project, specifically endorsing the tactical alternative development strategy and the timber harvest extraction design.

A compilation of public comments received during the DEIS comment period and the response to comments can be found in Appendix A-9 of the FEIS. Other comments received during the Scoping period are located in the project record at the Feather River Ranger District in Oroville, CA, available for review upon request.

1.9 Issues

The Feather River Interdisciplinary Team (IDT) reviewed the comments from the public, other government agencies and tribes for cause-effect relationships linked to this federally proposed action. These relationships served to highlight potential for, or unintended physical, biological and social effects of proposed treatments, and were used by the IDT to refine the proposed action and as the basis to explore alternatives.

The IDT identified cumulative watershed effects as a relevant issue warranting special design criteria to minimize predicted short-term impacts to water quality from federally-proposed activities such as logging, prescribed burning and road decommissioning. Although watershed systems can tolerate certain levels of land disturbance; there is a point when cumulative events begin to have adverse effects. The Forest Service identified high disturbance levels in Rabbit Creek subwatersheds 5, 6, and 8 surrounding the community of LaPorte and subwatersheds 11 and 15 in the area of Secret Diggings 9, primarily due to historic human development and uses (refer to section 1.4.3).

Other relevant issues represent minor and/or non-variable consequences typically which can be avoided, partially or fully mitigated by standard operating procedures (typically applied as Best Management Practices administered under contract “B and C” provisions). Other relevant issues are discussed in section 2.2 and Appendix A-9 to the FEIS.

Non- Significant Issues were defined by the IDT as those: (1) outside the scope of the proposed action; (2) already decided by law, regulation, Forest Plan, or other higher level decision; (3) irrelevant to the decision to be made; (4) conjectural and not supported by scientific or factual evidence; or (5) the comment could not be phrased as a cause-effect relationship. The Council on

Environmental Quality (CEQ) NEPA regulations explain this delineation in Sec. 1501.7, "…identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review… (Sec.1506.3)." For these reasons, non-significant issues are briefly discussed in this FEIS, appendix A.

1.10 Permits

In accordance with 40 CFR 1502.25 (b), the Environmental Impact Statement is to list all Federal permits, licenses, or other entitlements that must be obtained in implementing the action alternatives. Prescribed burning will require an approved Smoke Management Plan and burn permit from the local Air Quality Management District (AQMD). No additional Federal, State or County permits, licenses, or other entitlements were identified as requirements for implementation of the proposed action or alternatives.